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ABSTRACT

The essays contained in this booklet are 1) "Education for a 'Learning Society': The Challenge" by Ernest Bayles in which he calls for focus on learning to live, developing skills of reflection and judgment applicable to vital issues, and reflective teaching; 2) "Teacher Education in a Learning Society" in which David Turney demands teacher education programs more deeply committed to continuous professional learning for teachers, and greater freedom, excitement, and imagination in that learning; 3) "Empirical Evidence of the Experimental Mind in Education" by Bob Burton Brown which points out that we encounter a belief vs practices dilemma and a schism between fundamental beliefs and educational beliefs; 4) "Old Wine in New Bottles" in which C. Benjamin Cox foresees a more significant role for teachers in the educational growth of students, the use of specialists, learning evaluation, and curricula characterized by student-oriented inquiry; 5) "Reform from Within" by William Clark Trow which assails panacea proposals and argues for multi-variable innovation making use of modern tools; 6) "The Learning Society: The Other Side of the Coin" in which Frederick C. Neff attacks the false dichotomy of work and learning and calls for utilization of knowledge in the service of humane ends; 7) "Institutional Conditions for the Learning Society" by Robert E. Mason which asserts that schools should be orderly places since order is characteristic of both intellectual and moral discipline. (JS)

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EDUCATION FOR A LEARNING SOCIETY

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MAJOR PAPERS OF THE 1969 ANNUAL MEETING

The Third in a Series

ERNEST E. BAYLES
DAVID TURNEY
BOB BURTON BROWN
C. BENJAMIN COX
WILLIAM CLARK TROW
FREDERICK C. NEFF
ROBERT E. MASON

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National Society of College Teachers of Education

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EDUCATION FOR A LEARNING SOCIETY

HOWARD E. TEMPERO
Editor

NATIONAL SOCIETY OF
COLLEGE TEACHERS OF EDUCATION
1969

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COLLEGE TEACHERS OF EDUCATION

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PREFACE

ERWIN H. GOLDENSTEIN

President, National Society of College Teachers of Education

This is the third in a series of publications begun in 1967 to bring to the members of the National Society of College Teachers of Education the major addresses delivered at the Annual Meeting. The Society currently "exists out of a conviction on the part of its members that these problems are far more likely to yield to the combined efforts of specialists in all fields when such specialists complement each other's contributions and when they help each other to keep focused on the larger objectives of education in education." In keeping with this conviction, the theme chosen for the 1968-1969 Annual Meeting was "Education for a 'Learning Society.'" This publication brings together seven essays on that theme and explores the implications of the theme for the work of professors of education.

Ernest Bayles, in his presidential address, argues that learning to work must be superseded by learning to live; that the acquisition of knowledge must give way to the acquisition of the skills of reflection and judgment, and that such skills must be developed in their application to vital issues. He pleads for a type of reflective teaching in which the teacher becomes the chairman of an investigation committee rather than a dispenser of knowledge.

David Turney develops the idea that teacher education must strive to eliminate controls affirmed through "educational gatekeeping;" and, hopefully, he detects some leaks in the dike of these controls. He demands that teacher education programs of the future be more deeply committed to continuous professional learning for teachers, and to greater freedom, excitement, and imagination in that learning.

Bob Burton Brown, somewhat pessimistically, tells us that if the learning society depends upon the experimental mind, it will be somewhat slow in arriving. Some of his recent research on the experimental mind in education indicates that we encounter not only

a beliefs-practices dilemma, but, perhaps more crucially, a schism between fundamental beliefs and educational beliefs as well. While teachers seem to agree with Dewey's beliefs regarding teaching practices, they tend to disagree with his position on basic philosophical questions.

C. Benjamin Cox sees a new and far more significant role for the teachers of the future in the learning society. This teacher will have the sole responsibility for the educational growth of his students. He will have specialists available to him on call, but he will determine their use. He will also determine when his students have made sufficient progress to be promoted to one of his colleagues, and the curriculum with which he works will be one of involvement in vital issues and will feature student-oriented inquiry.

William Clark Trow, in one of his many contributions to NSCTE, assails those proposals for reform in education which depend upon a simple panacea. In contrast to such a simple approach, he assures us that multi-variable innovation is essential to needed reforms. He takes us to task for having modern instruments of educational reform at our disposal, but still devoting ourselves to the use of the same old archaic tools.

Frederick C. Neff attacks the false dichotomy of working and learning which he still detects in the "new Hutchins." He rejects the simplistic conclusion that most people of the future will be learning while only a few are working and he issues a rather eloquent call for the utilization of knowledge in the service of humane ends.

Robert Mason affirms that the purpose of deliberate education is to produce good men and women. He asserts that order is characteristic of both intellectual and moral discipline and that the school should, therefore, be an orderly place. He describes the learning society as one in which we order our problems and solve them in the light of the best available evidence. In conclusion he calls upon us to have the "guts" to defend the learning society against those who propose to subvert it.

The National Society of College Teachers of Education expresses its deep appreciation to these seven authors for their challenging contributions. I believe that the readers of this publication will agree with me that they have written a series of exciting and relevant essays which collectively constitute a worthy successor to the publications of 1967 and 1968.

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EDUCATION FOR A "LEARNING SOCIETY": THE CHALLENGE

ERNEST E. BAYLES*

The National Society of College Teachers of Education, organized in 1902 with Charles A. DeGarmo as its first president, John Dewey the second, and James E. Russell the third one, can boast a venerable record of service to American education; one that can be matched by very few organizations representing professional concern. Through two-thirds of a century, it has persistently (even stubbornly) held the view that American education should be improved and has pointed to ways in which it could be. Though never having large membership, it could always boast of one that was significant; one that represented the leading educational thinkers and workers of the day.

We, who are responsible for it now, have been continually asking ourselves what must be done to maintain the viability of the past. The answer seems to be that we must forge ahead to meet the new challenges of each new day, thereby continuing the aggressive leadership that has stood to our credit. As professional-education organizations go, we appear to be unique in that we draw our membership from and (hopefully) represent all aspects of what is often derogatorially called "the Establishment." We seek to be—as Clark Trow recently expressed it—"the strong centralized professional organization that is so much needed." As time goes on and the total number of professors of Education becomes progressively larger, the tendency is to split off into separate groups, each representing an aspect of the total educational enterprise but tending to confine itself to that and thereby to lose sight of the overall thrust of the enterprise as a whole. That the subdivisions are needed is not questioned, for among other things they serve the very important function of achieving more personal involvement on the part of individuals. That we recognize in this convention by ar-

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ranging facilities for our more specialized affiliates to hold separate sessions of their own.

But the danger is ever present and tends progressively to increase that, as with increasingly complex organic structures of all kinds, the more each part or aspect becomes engrossed with its own special field or function, the greater is the possibility—yes, the likelihood—that less and less attention and effort will be expended in behalf of the coordinated workings of the organism or organization as a whole. And this, of course, can sooner or later become lethal. It is to counteract this tendency that seems to have been, and seemingly should continue increasingly to be, the unique purpose and function of the National Society of College Teachers of Education. To see American education clearly and see it whole; to attend to the coordinative meshing of all parts; to keep before the profession a total, overall, synoptic envisionment and concern with all aspects of the enterprise; and to strive for a fully coordinated, smooth working, integrated, efficacious totality, pressing toward justified and justifiable ends; this to me is what has been and should continue to be the supreme concern of NSCTE.

Last year our convention theme was "Teacher Education for the Future; New Directions and New Developments," the title of the monograph recently distributed to the membership which carried the major addresses of the general sessions. This year our theme is not wholly different, but it is by no means a repeat. Last spring, not long before the May meeting of our executive committee, a mimeographed article came to my desk from the Center for the Study of Democratic Institutions, Santa Barbara, California, written by its president, Dr. Robert Maynard Hutchins. In the past my own convictions seemed to be vitally at variance with those of Dr. Hutchins, and many of those here today can well remember the exchanges that took place a few decades back between Bob Hutchins and John Dewey. It was not that Dewey disapproved using the literary classics—the 100 Great Books—in a program of liberal education; but that they alone were not enough.

Dewey's disapproval was, rather, of Hutchins' seeming exclusion of *everything but* the classics—for a liberal education, that is, one that would lead to a bachelor's degree. But in 1968, either in the article or in Hutchins' recent book, *The Learning Society,* I found no mention of the Great-Books program. Instead, the argu-

ment hinged on the growing rapidity of change, the necessity of preparing educatees for a future that is in most ways vitally uncertain, most likely to be different from anything we envision now, but the greatest certainty seeming to be that "we shall find ourselves largely without work as we have understood work in the past." Yet, educationally, we seem today to be more work-oriented than ever before. "In a world that [is] beginning to be plagued with a surplus of manpower, [we are] furiously grinding out more." He wrote, "What education can and should do is to help people become human. The object of education is not manpower, but manhood. . . . If instead of focusing on work, we are now to think about living wisely and agreeably and well, the conviction that we must do so must in some ways spread throughout the culture." Finally Hutchins concludes,

> Machines can do for every modern man what slavery did for the fortunate few in Athens. The vision of the learning society, or, as Sir Julian Huxley has put it, the fulfillment society, can be realized. A world community learning to be civilized, learning to be human, is at least a possibility. Education may come into its own.

To me—*to me,* I say—this argument comes so close to satisfying Dewey's objection that you may detect a bit of a smile as I say it. But the smile is not one of "I told you so." It is one, rather, of "Fine! Now let's see where we can go from here." Hutchins notes that education cannot accomplish the task alone; that education is subject to "the control of the culture." And he recognizes the enormity of the task when he notes that, up to now, increases in available leisure time have not been utilized, either by the wealthy or by the nonwealthy, for serious study of the issue of what humanity must do in order to make strides toward becoming more human. The entire culture must press for this. He notes, as an example, that in the United States television might have done this but, instead, it "was largely devoted to selling soap, beer, deodorants, and cigarettes and to entertainment that would keep the viewer riveted to the set between advertisements." This opens the door to pessimism, but Hutchins does not leave it there. He ties a learning society to democracy and, vice versa, democracy to a learning society. And here is maybe a take-off point, whereby I can possibly carry the argument a bit further.

Taking democracy to mean popular sovereignty on a one-man-

one-vote basis, we seemingly have to define it as equality of opportunity to participate in arriving at decisions on matters deemed to be of group concern *and* equality of obligation to abide by those decisions until they are revoked or revised. This is a far cry from the anarchy of permissivism; of insistence that each and every one has the God-given right to act entirely as he pleases. Permissivism is not the finally purified form of democracy; democracy means *government,* albeit with consent of the governed.

But this does not mean that, to be democratic, decisions always have to be right or just. A people can be democratic, yet be very wrong-headed. And that is the crux-point; that is crucial when it comes to asking what democracy logically implies in regard to keeping school. If our hope or desire is that our decisions will always be the best possible—and presumably it is—, then we have to do something more than merely proceed democratically. We have also to look to the collective *wisdom* of a people; to take whatever steps are necessary to have a body politic that is not only able but also disposed to judge wisely and well. And this is where education comes in, whether it be inside or outside of school.

If, as in "Damn Yankees," what Lola wants Lola gits, then it behooves Lola to be pretty circumspect in deciding what she wants or what she should strive to get. Bad decisions have a way of backfiring and defeating their own purposes. And mere possession of factual knowledge, no matter how inclusive it may be, is no guarantee of wisdom on the part of the possessor. Information is *necessary* in decision-making, but is not *sufficient.* To achieve a high batting average in the making of *good decisions,* a person or a people needs extensive and continuing training in doing just that. *And this is what is meant by "reflective teaching";* promoting on the part of the trainees heightened capacity to think reflectively, to think independently and well. Perhaps in so saying we should use the term education rather than training, for that to me is what people tend to mean, even though they may not clearly realize it, when they feel that a distinction should be made between the two terms.

Moreover, I think this is what Dr. Hutchins has to mean and does mean by his expression, "the learning society." For a learning society is one that is continually on the job. At whatever age or stage in life, it is continually questioning old convictions and decisions and seeking to improve them. And what can this be but

"continuous reconstruction of experience"? And what is democracy but a governmental form that incorporates this process in the very warp and woof of its makeup; one that, with Charles Darwin, makes change normal rather than abnormal? This is exactly what Bode meant when he insisted that democracy is the foe of absolutes, for absolutes make change catastrophic. Dewey (1933) said in *The Educational Frontier,* a yearbook by the way of the NSCTE,

> . . . We believe profoundly that society requires planning; that planning is the alternative to chaos, disorder, and insecurity. But there is a difference between a society which is plann*ed* and a society which is continuously plann*ing*—namely, the difference between autocracy and democracy, between dogma and intelligence in operation, between suppression of individuality and that release and utilization of individuality which will bring it to full maturity.

Thus, we are back to Dewey and Bode, though it would seemingly be more accurate to say that we may be *catching up* to Dewey and Bode. I cannot help but wonder when I hear the oft-iterated claim by this person or that that he has gone through Dewey and beyond. In no case that I have examined—and I have long kept a weather eye out—have I found fundamental "going beyond" Dewey. Many have been the elaborations that have carried the basic position into areas that Dewey, in spite of his tremendous output of publications, did not examine *in detail.* But that is just the point of Dewey: if we who come after do not in certain genuine senses "go beyond" Dewey, Dewey himself would have been one of the most disappointed of mortals. Red Grange—the "Galloping Ghost," one of the great halfbacks of collegiate football—was coached by Bob Zuppke who never made the first team when playing college football. It is eminently possible for a student to outstrip his teacher—to go beyond him—but it is to be hoped that the student will do so *because* of his teacher, not in spite of him. If Dewey means anything, that is it. And is that not what *we* must mean when we speak of "education for a learning society"?

But how can Hutchins legitimately argue that the tremendous reduction in human-labor requirements and the tremendous expansion of leisure time available for each and every person that are almost upon us will promote a learning society? Why will the out-

come not be the indolence promoted by free "bread and circuses," rather than progression to new and better things? Unless we take steps to the contrary, he grants, this may indeed happen. But it would be the end of humanity. The very survival of *Homo sapiens* is dependent on our doing what is necessary to prevent that from happening. We cannot put a man on the moon unless we are disposed to keep working at it. Thus, the end sought in reflective teaching will have to include not only reflective capacity, but also the disposition to put such capacity to work.

Let us take a closer look at reflective teaching, for it is nowadays frequently characterized as "old hat," as well as brushed aside with the passing comment, "Sure, that's fine for certain things, but no one method should be used for everything." My response to these commentaries, whether voiced or not is, "Well, if it's so 'old hat,' why do we find so little of it—from kindergarten through graduate school in private schools as well as public?" and "In what fields, specifically, is it not applicable?"

As to the latter question, I find no fields or areas of human concern in which reflective teaching is not applicable, and have gone to particular pains in various publications to illustrate how it can work in a wide range of such fields or areas, particularly in many ordinarily considered inapplicable. One comment I received not long ago was, "I never before thought that spelling could be taught reflectively." But, instead of being inapplicable, reflective teaching is just the making of spelling competency. It helps each student develop a rationale, which gives him a "spelling sense" and thereby makes for independence.

I have long liked Bode's expression that reflective thinking is "a process of finding and testing meanings," though I'd prefer the term *insight* rather than *meaning*. "Meaning" ordinarily or commonly seems to carry the rather exclusive connotation of expression in words, and what we seemingly ought to seek in reflective study is that cognitive sense of pattern—that "feel" for a thing—that lies back of and is prior to words. Words are readily caught up, memorized, and bandied about without benefit of a realising sense of intended referents. By "insight" I mean what*ever* one "takes" a thing to be—right or wrong, true or false, penetrating or shallow, reducible to words or not (and it usually is not). That is what I think we should seek in reflective study; true insights, certainly, and as well ex-

pressed in words as possible, but never to be replaced by *mere* words.

The sixties, however, seem to be witnessing a sharp pickup in attention devoted by popular writers to reflective teaching, or to the expression having the same meaning, problem-solving in the classroom. And, 1968 seems to have been a banner year for during the year Bruner's *Toward a Theory of Instruction* has been published in paperback and appearing also have been Hutchins' *The Learning Society* and now George B. Leonard's *Education and Ecstasy.*

Though failing utterly to acknowledge precedencies, all three publications make reflective teaching central. Bruner becomes quite explicit as to classroom methodology, though it is well that his title is "*toward* a theory" rather than claiming it to *be* one. Moreover, he retains the convention of having teachers in charge of classrooms, even in one illustration having six teachers for four students. (p. 57) Hutchins does not go enough into method and content to make really clear whether he wants a *return* to something (as does the Council for Basic Education) or is wanting to go forward, although the latter seems the more likely. Leonard, in contrast, is really "far out," insisting that, if teachers are unwilling or unable to discontinue traditional re-citation, school children will be better off to have no formal schooling at all. However, he is no ordinary "attacker" of the schools. He decries what is being done but, contrary to certain reviews of the book, becomes distinctly explicit (at least, in terms of broad guidelines) as to what he thinks the schools ought to become, and what he feels they indeed will have become before the twenty-first century arrives.

Both Hutchins and Leonard are thinking in terms of an age when computers will have come into their own, but will have transcended their limitations of today when responses can be evaluated only on the basis of agreement or disagreement with previously programmed answers. Education is to be tremendously individualized, with feedback and reinforcement coming immediately at the time required, not coming long afterwards if at all. Both Leonard and Bruner make much of the dire necessity of interaction or feedback coming exactly when a learner senses the need for it and is ready to take advantage of it. Thus, as Leonard iterates and reiterates, children will learn the "basics" years earlier than they do now, and

very few will fail to learn them. Human brains seem to have potentials far and away beyond anything now even remotely imagined. And Society, by upgrading cooperation and downgrading competition, will place a premium on "progressive reconstruction of experience" throughout human lifetimes—"The Learning Society." Thus, we see Leonard, Bruner, Hutchins, and Dewey all in the act and in agreement on essentials.

Whether by the twenty-first century we shall or shall not have gotten the whole way toward a laborless society—one in which everyone of us will be able to work for a life instead of for a living—, we indeed have already been making long and rapid strides in that direction and will doubtless accelerate the progression as time goes on. And that certainly means that the question of education for a learning society is already with us; that it is high time education-wise for us to relinquish our obsession with merely knowing the answers that already have been worked out, and assign priority to the way to get answers to ever-evolving questions.

This assuredly means reflective teaching. Head Start programs and adult-education classes in teaching bridge or silversmithing as leisure-time hobbies are all well and good—in varying degrees even necessary—but they are a far cry from adequate answers to the issues that face us. What is necessary is a thorough revamping of the warp and woof of the designs we are and have been making for the entire sweep of educational programs. I agree with Bestor, Rickover, and Company that American education today is not measuring up to what it should, but I violently disagree that the way to remedy the situation is to return to the "good old days" which, as Will Rogers was wont to remark, never were anyway.

And this is where Donald N. Michael impresses me as coming very much to our assistance. In his book, *The Unprepared Society,* published in late 1968 as the Tenth John Dewey Society Lecture, he refuses to be a starry-eyed optimist, exuding confidence that everything is going to come out all right. Instead, he devotes many pages to pointing out and warning us of the many obstacles that do and will confront us *if* and as we strive to revamp our total way of life so as to take advantage of the technological capacities that are already with us and that will multiply increasingly as time goes on. But humanity at large is seemingly not willing, or possibly even able, to change its attitudes and its convictions fast enough to keep

pace with the growth of technological capability and put it to work, either promptly or maybe even tardily.

Witness, for example, today's widespread incidence of want and even starvation in a world that can readily produce a sufficiency for all. And witness also a recent presidential campaign in which war and the threat of war were universally decried, yet with no mention whatever of the one great but simple step that we know would do the trick because we have long employed it on local and national levels—policing agencies that can and do enforce duly enacted rules and regulations regarding human behavior. An international police force, committed to enforcement of duly enacted international law (whether enacted by the United Nations Organization or by some more democratically representative body) is the only effectual alternative to the costly as well as self-defeating arms race among national military establishments.

Michael's final proposal, guardedly optimistic, is that human attitudes as well as concepts will have to change—an educational undertaking, but one that the bulk of the culture will oppose because of its threat to vested interest; to human preference to "suffer the slings and arrows of outrageous fortune . . . and makes us rather bear those ills we have than fly to others that we know not of." Hence, Michael suggests that we probably cannot expect an entire public-school system to initiate and carry out so widespread and fundamental a reconstruction as is required. Piecemeal steps, therefore, will have to be taken—pilot projects, sponsored by whatever agencies can be enlisted, to whet appetites and point the way. And, to me, this is virtually what George B. Leonard is suggesting in *Education and Ecstasy*.

But there is a large and vital step that can even now be taken, one that not only can be inaugurated piecemeal but which also by now strikes a familiar chord for a large segment of the educational profession; and that is what I have been calling *reflective teaching*. As I bring my remarks to a close, let me sketch briefly what reflective teaching means to me.

The idea of reflective teaching involves a rather distinct modification of the meaning that the word "teaching" has long borne; the idea that the teacher possesses an item of knowledge that he attempts to convey to his students. In reflective teaching, the teacher is not to be taken as a conveyor of knowledge, but as the chair-

man of an investigational body, a body seeking to become better informed on matters deemed by them to be significant or to work out solutions to problems that are puzzling them. The "teacher" as so envisioned is not expected to be already in full possession of the "answers," but to be able to see that the investigation proceeds forward and achieves progression toward solution or conclusion. In this way, no investigation is limited by the already existing "answers" of the teacher, and no classroom "test" of the outcomes of such a study can possibly be prepared prior to the study. Even though, statistically, a teacher may be more often "right" than will dissident members of his classes, it must be the *studies* that determine the conclusions, not what the teacher (or even the entire world) previously believed to be "right."

Solutions or answers are the *ends* sought in reflective study; not the beginnings. Back in the later twenties and early thirties, Henry Clinton Morrison's "mastery formula" was quite in vogue, with its "preview" or "overview" coming at the *beginning* of a "unit" and subsequent study designed solely to fix in students' minds what was originally previewed. This was a case of giving "*the* answer" at the beginning of a study and not being satisfied until *that* answer had been firmly established.

In contrast, reflective study has its take-off with a *problem*—an unanswered question that is a genuine challenge to the participants. This is what the writer of a mystery story has to achieve at the outset, and the more gripping the original puzzlement the more successful the story will be. Moreover, arrival at a satisfactory answer terminates the study; a reader is then through with it.

Thus, reflective study works toward release from puzzlement, and it is the participants' own urges or desires that furnish the drive for fulfilment which, when satisfied, provide the "ecstasy" of success: education for ecstasy. And I know from long experience that it is not hard for either prospective or experienced teachers to catch this idea and become intrigued by it. They sense it as the rationale that they have vaguely and gropingly sought; one that explains why, when they have achieved such an outcome in their own classes, they have known that they had a banner experience. Moreover, it is the kind of classroom experience that can be achieved in isolated cases; by teachers working in their own classes without having the whole school organized and conducted in that way. Though, of

course, the more widely, systematically, and consistently it is used, the more dependable will be the results and the further will be the progression by school populations as wholes.

And let me make one additional point; one that is essentially curricular. Reflective study can be touched off and carried forward whether the problem under consideration is significant or not. Who cares whether there really was a Cock Robin or a real killer, or whether it's just a good yarn? However, the problems for which school time may justifiably be taken should seemingly be significant ones, and that brings us smack into the question of what constitutes educational significance. Hopefully, attention will be given this question as this convention proceeds, but I'd like to make one remark about it before I relinquish the platform. It would certainly seem to mean that school curricula should be specified and described in terms of *issues to be studied,* rather than as competencies (knowledges, skills, and attitudes) to be achieved. Controversial issues? Assuredly so! But that expression introduces a redundancy, for if it isn't controversial it isn't an issue.

Education must be taken off the shelf, or out of the ivory tower. Else, there will be no ecstasy, and probably not much education. One of the most flattering comments, whether deserved or not, that I ever received from a student was,"Your classes were always exciting." To achieve excitement, we must get out into the marketplaces of life and deal with the issues that arise there; issues that involve basic theory as well as immediate practicality.

We in Education have a great challenge to meet. What must we do? 1. We must learn to live with computers, but must see that they become humanized, individualized, interactive, sensitized to and able to cope with the possibility that in some cases a subject may know better than the written-in program. 2. Education for ecstasy must be sought and fostered; increasingly must school children be enabled to experience the thrill of accomplishment, so that they come to seek and enjoy change rather than fear it. As Jim Hazlett, Kansas City school superintendent, recently said to a group of supervisory personnel, "We must have the happy faculty of being comfortable in a time of change." 3. The human contingent of the teaching forces must be equipped and disposed to teach reflectively —to serve as chairmen of investigational bodies, able and disposed to promote studies that will achieve progression into realms un-

known and unanticipated prior to such study. In other words, with the greatest immediacy we can muster (and more than we now deem possible) we must develop schools that will achieve *education for a learning society.*

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TEACHER EDUCATION IN A "LEARNING SOCIETY"

DAVID TURNEY*

The idea that the good life is defined at least in part by mankind's involvement in continuous learning is an old idea. This theme has been elaborated by many great thinkers of the past. Indeed, the notion of continuous learning forms the cornerstone of Dewey's thought about the basic purpose of education. It is not surprising that this idea has been common currency for a long time, for there appears to be in all human life a persistent tendency to continuously reconstruct perceptions of the world around it. It is, however, only in recent years that we have learned how essential such activity is to human survival. From a long series of investigations beginning with the data gleaned from the concentration camps in World War Two, adding the insights derived from the "brainwashing" techniques employed during the Korean conflict and culminating in the long series of experiments with sensory deprivation conducted by D. O. Hebb and others, we now understand that the human mind is, among other things, a data processing mechanism that requires, for its survival, a continuing input of sensory impressions. If we cut off this input of sensory data, the mind, to insure its survival, will begin to draw data from its memory bank and treat this stored data as if it were fresh sensory input to be processed. Hence we find that any person placed in a specially designed chamber in which all impressions of sight, sound, touch are eliminated, in a relatively short time begins to have hallucinations.

There is then, built into every human being, not only the disposition but the vital need to perceive and process data in the external environment.

When we talk about continuous learning in this light we are dealing with a phenomenon as powerful as the migratory instincts of birds or the spawning drive of anadromous fish.

Continuous learning in the sense that people are attending to

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their surroundings, responding to the stimuli that reach them, creating patterns of impressions for subsequent reference, and generating concepts and generalizations to guide further learning activity, is happening in all of us, wherever we are, every day from birth to death. The quantity and quality of this activity undoubtedly varies over our life span but it would seem that the life of the mind dies slowly as do other essential life functions.

Beyond this natural ebb and flow of mental activity, a society can affect the intellectual activities of its members in a number of ways.

GATEWAYS TO LEARNING

One way to look at the effect of society on learning is in terms of the kinds of controls that can be exerted by a group of individuals within its boundaries. The first and perhaps most crucial of these controls lies in the provisions that a society makes or does not make for children to learn the symbolic systems on which intellectual development depends so heavily. Societies do limit the individual's prospects for developing proficiency in the use of such systems either deliberately, as in the case of a slave society where such learnings are made generally inaccessible, or through default, as in the case of a society which values other consequences to the extent that needed resources are not available to present adequate opportunities to individuals for the mastery of such systems. The breakdown of learning in inner city school systems is an illustration of this type of control through neglect or default.

In the second place, social systems tend, through the structures they maintain, to control the associations and contacts available to individuals or groups of individuals. A person can only learn what he experiences actually or vicariously. To the extent that mastery of symbolic systems is weak, the only other avenue for learning has been direct experience. In this regard, the individual is limited by the human contacts available to him. Most of us didn't need the Coleman report to remind us that it does make a difference with whom you go to school.

Thirdly, all social groups generate systems of values that regulate conduct. In general, people learn less about what is prohibited or removed from the public domain and in a like manner we tend to engage in those activities that society rewards. Again,

the way a society distributes its resources tends to pattern the learning experiences that may be available to an individual. Mobility is essential to some kinds of learning and some of our citizens are much more mobile than others. Certain kinds of instrumentation are critical resources for some types of learning, as for example the basic requirement of microscopes for some types of scientific learning. Many of our early advances in astronomy were possible because gifted amateurs were able to command the use of a telescope. Clearly such instrumentation is not equally available to all learners.

Some of the work of the professional educator has been directed at limiting the accessibility of learning experiences. In 1962, William Van Til, in his presidential address to the ASCD Convention of that year, pointed out that curriculum workers were, in many ways, "educational gate keepers." Many of the membership at that time thought that this was a very harsh and inaccurate statement. I view it now as a pronouncement of great insight. Curriculum workers always have been greatly concerned with prerequisites, sequence, admission to programs, the elimination of learners from programs. All of these functions have been directed at managing the flow of learners in the aggregate through a lengthy learning process. The professional educator has always had a considerable power, backed by social sanction, to render available or withhold information from learners.

In the past twenty years this power has increased to the point where some have stated that we are close to becoming a credentialed society. It seems quite clear that this "gatekeeping" power has been enhanced by the growth of commercial testing agencies and the advancement of testing capabilities through data processing applications.

At the present time, we appear to be in the midst of a revolution in which at least one major thrust is directed at breaking the power of the professional educator to control the learning process.

LEAKS IN THE DIKE

Our present system of educational control appears to me to be like a great dike holding back the sea. As I look around, I see many leaks in this dike and tremendous pressures building up behind it.

It seems to me that the mass media, television in particular, represent the greatest breach in our academic breakwater.

When I was young my parents appeared quite wise to me and indeed they did have access to much information not accessible to me. Today, there is little I know that my children are not at least aware of. I can in no way play the role of the priest-like oracle, because in most of our conversation, we are dealing with common sources of data. We can check our perceptions of these data and while our interpretations may, on occasion, differ, neither I nor my children would dare approach such interpretation as if we were the exclusive possessors of the truth.

Television has, in truth, become a "window on the world" and through this window we perceive images of reality that, in terms of vividness and impact, cannot be duplicated in the classroom. Today most sixth graders *understand* more geography than I had mastered when I finished my undergraduate work. High school students today are more aware of the political world than I was at the end of World War Two.

In spite of all the trivia that is projected to us through this medium, the amount of reliable data now available to us through this means is generally beyond the capability of most educational institutions to produce.

Another breach in the breakwater has to do with the movement of industry into educational operations. Why study formally anything that is available in programmed form? Such learning is becoming a commodity and if the price is right, we may select the purveyor of our choice. I do not choose to argue the wisdom of such approaches in this paper. We as a profession are also one of the "learning industry's" customers and are involved in the testing of these procedures. In fact, some education institutions are already looking to the industry to provide complete learning systems.

Under the pressure of population increases we see an increasing demand for talented and skilled people who can assume roles formerly filled only by those properly credentialed. The law of supply and demand operates as inexorably with respect to human talent as it does with other resources. Our own educational institutions are feeling this pressure and are responding by employing larger numbers of persons with less than desirable credentials, in our own view. Again, I do not wish to comment here on the propriety of this trend but merely wish to point out that here, too, our former regulation of the learning process in weakening and more,

less formal routes to learning are becoming available. The military long ago assumed educational functions and now such agencies as job corps, head start programs, and a variety of industrial on-the-job training opportunities are burgeoning.

In fact, developments in education are occurring at such a rate that it is possible that the bulk of professional preparation for teaching might be better accomplished in the work setting within a design providing for continuous development.

What I am suggesting here is that the time-honored ways of eliminating large numbers of our citizens from the educational process are disintegrating, that the "credentialed society" is about to come apart at the seams, and that the consequent loosening-up of our former controls present us with a magnificent opportunity to reconceptualize the kinds of educational constraints proper to a learning society.

Thus far I have examined very briefly three ideas: that continuing education in a learning society is not only desirable but essential, that professional educators have in the past spent much of their energies devising ways to regulate the educational process and that today, strong forces are at work to eliminate traditional constraints on education. If, in the future, educators can focus their energies in new directions more consonant with what I perceive as the basic need of all men to continue to educate themselves, if we in the profession can be more concerned with removing roadblocks to learning than regulating process through a system, perhaps we can look forward to a change in teacher education along the following lines.

CONTINUING EXPERIENCES FOR THE LEARNING TEACHER

To begin with, I will list some kinds of experiences that would appear to be useful for the continuing education of teachers. These are:

1. Reality experiences
2. Foundational studies
3. Experiences leading to understandings of technology and its uses in education
4. Experiences leading to a deeper grasp of content
5. Experiences in educational program development

6. Experiences in educational investigation
7. Experiences in self-analysis of teaching effectiveness

These experiences are not listed in any particular order of preference or value. All of them, I am convinced, can play some part in the continuing professional growth of the teacher.

Reality Experiences

While a school is always part of life, it is never the whole of life and those of us who inhabit and work in this special environment for awhile, inevitably begin to lose our breadth of understanding of the human condition. As our own life space shrinks to classroom or school size, the richness of the world around us begins to drop away. Too often our personal associations begin to be limited to other professionals who work in similar situations, hold similar beliefs and work within a similarly restricted context.

If the teacher is to be of real help to children who soon will live their lives in a great variety of situations, he needs continual renewal of his insight into many worlds quite different from his own. Every three or four years teachers and administrators should involve themselves for a few months in a totally different setting than the school. Such experience could include work overseas, but our own land offers a great variety of possibilities. VISTA work in a migrant camp, work in an industrial plant, service as an ambulance attendant, work at a nursing home or retirement village—all such experiences should renew the understanding of the realities of everyday living for people in a variety of walks of life.

The important thing about such experiences is that they are work oriented. The "tourist" view of such segments of real life is usually misleading. The critical question that the teacher must ask of these experiences is: How does my work in the classroom relate to this experience in living and in what way will my teaching have relevance to a young person who may function as a member of society in this situation?

Foundational Studies

Parallel to and closely related with reality experiences, are those studies of educational sociology, educational philosophy and other areas in the social sciences that serve to build on real experience, illuminate it and integrate it into an intellectual frame of reference which can serve as a guide to professional practice. The

study of foundational areas without the background of experience is apt to be quite artificial while the experience without the amplification proceeded by the scientific study of society is likely to be shallow.

The two kinds of educational experience are most useful when they exist together in a kind of symbiotic relationship. Each kind of experience requires a different setting, one action oriented the other reflective.

Experiences Leading to Understandings of Technology and Its Uses in Education

In view of the rate of innovation in educational technology today, it seems essential to offer, periodically, experiences that will present new skills, techniques and understandings to teachers. Such experiences could be made available on university campuses, could be offered inservice by means of university-based mobile technology laboratories, or could, in large school systems, be built in as part of the inservice program of the school. In any event, such experiences are costly to present, require a considerable array of talent to produce adequate learning, and are dependent on appropriate material for effectiveness.

Experiences Leading to an Improved Grasp of Content

Independent study, college classes and seminars, participation in professional conferences are all useful media for assisting a teacher to gain depth in a particular content area. The need for such study is so universally accepted that there is no need to document it here. Further, this is a type of learning that proceeds best under some type of continuous program rather than through intermittent efforts. Independent study is ideal for providing longitudinal continuity while other media can best provide the occasional intensive work. Once begun, this must become a never-ending exploration of a field of learning.

Experiences in Educational Program Development

While every teacher needs to become as much of a scholar as possible in some area of learning, the task most characteristic of teaching is that of translating content or process into materials of learning easily accessible to pupils. Improved teaching will always be quite dependent on adequate materials of instruction and procedures and programs adapted to individual needs.

The preparation of learning programs and materials for immediate use is one of the most critical tasks of the classroom teacher. Involvement at the classroom level in such work is surely one essential for professional growth. For such experience, the inservice design seems most useful. Planning and designing of curriculum elements with the counsel of persons skilled in such work, the testing of products with live students in the classroom, and the subsequent revising and modifying of the product is a work cycle that must be kept operative to insure that the instructional program does not stagnate.

Experiences in Educational Investigation

While not all teachers can be good researchers, all probably need to be involved from time to time in the solution of educational problems peculiar to their school and their classroom. Defining a problem, designing a study, collecting and analyzing data, and the forming of supportable conclusions serve to help the teacher develop an experimental approach to teaching and can also result in workable solutions to classroom and school problems.

Experiences in Self-Analysis of Teaching Effectiveness

Finally, the possibilities for involving a teacher in a serious study of his own teaching activity represent a powerful tool for professional improvement and instructional refinement. Techniques for the analysis of teaching are now available and can be learned by all professionals. These, when properly employed, carry with them a motivation for improvement that is far superior to earlier rating systems and merit pay schedules. One look at yourself on a video tape monitor is literally worth a thousand supervisors' comments in terms of motivating needed change. Similarly a Flanders' interaction matrix usually reveals things about one's teaching that the individual never suspected. Continuing attention to and maintenance of an effective classroom pedagogy should be a part of every teacher's continuing learning.

CONCLUSION

What I have outlined here constitutes my own view of those components most essential to teacher education in a learning society.

From this point of view, a hierarchy of degrees is not particularly helpful, since the possession of one or more often results in the cessation of all further learning.

The professional school that is committed to continuous professional learning for teachers must find ways to make such learning easily accessible to the profession. Such a school must consider the possibility of decentralizing its operation so that much of its work is completed in school systems. No system of credits is really needed—a professional record of actual experience and attainment would be enough. The social reward system could be designed to support such a program and this type of recorded evidence. I am convinced that such a program is not only urgently needed but also completely practical. If we can begin to work in this way with teachers, we may then hope to contribute to the development of a learning society.

EMPIRICAL EVIDENCE OF THE EXPERIMENTAL MIND IN EDUCATION

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Despite widespread enthusiasm over its arrival, realization of the "Learning Society" may take a long time in coming. A learning society comprised of citizens who are committed to and skilled in the process of intelligent inquiry will depend upon an educational system which is thoroughly experimental in both outlook and action. Empirical evidence obtained from recent studies on the experimental mind in education gives cause for pessimism. (Brown 1968, 1969a, 1969b)

Achievement of the learning society was what John Dewey was talking about at the beginning of the Twentieth Century. He offered us an educational philosophy based on the premise that the experimental method of problem solving by which science has achieved such spectacular success in its conquest of nature should be extended to also become the basic method of education. Dewey's philosophy of experimentalism is supposed to have dominated the beliefs and practices of teachers in America for the last seventy years. However, the studies cited above indicate that teachers have neither understood nor agreed with Dewey so well or so thoroughly as is commonly supposed, and that they provide students precious little experience in reflective thinking or intelligent inquiry.

We find serious inconsistencies within the belief structures of educational practitioners—public school teachers, principals, and superintendents. Most of the professional educators we have studied like to think of themselves as democratic, flexible, open-minded, and experimental. Their responses on the *Teacher Practices Inventory* indicate they are in moderately high agreement with the educational practices advocated by John Dewey. However, when we sent research teams out to observe the actual classroom practices of these

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teachers, we found them rarely using such practices. Searching for some explanation of this theory-practice discrepancy, we measured the underlying philosophic beliefs of the educational practitioners on the *Personal Beliefs Inventory* and found them to be in very low agreement with Dewey at this level of belief. At the root of the beliefs-practices dilemma we discovered a schism between fundamental beliefs and educational beliefs.

Although teachers are inclined to agree with Dewey on beliefs about what teaching practices *should* be used, they are inclined to disagree with him on general philosophic questions. And when this contradiction among beliefs is severe (which occurs frequently) the observed classroom practices of teachers tends to be pulled in the direction of the underlying philosophic beliefs. In other words, anti-experimental philosophic beliefs seem to overpower and cancel out the teachers' good intentions to use the educational practices advocated by Dewey.

In a nation-wide study of the beliefs and practices of 407 student teachers (Brown, 1969b), we found a dramatic example of the failure to do in practice what is promised in theory. The hands-down strongest education belief of the student teachers was that a good teacher should *not* have all students working on the same page of the same book at the same time. Yet our field observations of these same student teachers revealed that approximately two-thirds of the time—you guessed it—they had all the pupils working at the same task at the same time!

An examination of the 10 strongest beliefs and 10 strongest disbeliefs on the *Teacher Practices Inventory* indicated not a single disagreement with Dewey by the student teachers. However, a similar analysis of their scores on the *Personal Beliefs Inventory* indicated agreement with the positive thrust of Dewey's general philosophy, particularly beliefs regarding relativism. Today's student teachers clearly accept the idea that we live in a changing and uncertain world of probabilities, and are disenchanted with the notion of absolute or immutable truths. However, when we looked at the 10 strongest disbeliefs we found that our student teachers seriously disagree with Dewey—particularly on questions of religion and morality. The students rejected Dewey's rejection of an ultimate Being and a spiritual realm beyond the world of nature. Likewise,

they rejected a notion (so central to every phase of Dewey's philosophy) that the method of science should be extended to deal with problems of values and morals. Contrary to the fears of many in the older generation, the student teachers seem to cling to the conventional moral and religious beliefs. It would seem that their failure to appreciate the relevance of scientific method in deciding what is morally right and wrong may be logically related to their failure to put into practice Dewey's belief that the method of science should be central to the educative experiences of children in classrooms.

In my own class in educational philosophy just a few weeks ago I took an informal survey of the beliefs of thirty-five undergraduate students. It neither surprised nor disturbed me that 68 per cent of them indicated a belief in God, but I must confess some dismay that more than half also believe in astrology and follow their horoscopes in the daily newspaper, and nearly as many believe in the existence of a wide assortment of supernatural beings such as ghosts, leprechauns, gremlins, fairies, and witches. Likewise, it sobered me some to discover that more than half perceived the recent trip of the astronauts to the moon and back as essentially a revelation of the magnificence of God's handiwork rather than as a spectacular culmination of centuries of scientific conjecture and experimentation. It is my own view, of course, that so long as the process of enculturation continues to pass along such pre-scientific views to this extent the development of experimental minds and the learning society will encounter mighty rough competition.

Let me refer you to Chapter 10, "Can Beliefs Be Changed?" in my book *The Experimental Mind in Education* (Brown, 1968). The study reported therein indicates that it is relatively easy for clever professors to engineer whopping big changes (30 to 40 points) on the *Teacher Practices Inventory,* but very difficult to budge scores even slightly (a statistically insignificant 6 points) on the *Personal Beliefs Inventory.* These data help to explain why colleges of education apparently are able to persuade students to accept Dewey's educational philosophy but are unable to sell them on the congruent underlying philosophic beliefs which seem to be essential for putting that educational philosophy into practice. Prospective teachers get only the practical part of Dewey's philosophy, and reject the part which conflicts with traditional beliefs learned at their mothers' knee. The data show that unless they accept the whole of Dewey's

experimentalism, teachers are not likely to employ educational practices consistent with it.

The discrepancy between educational and philosophic beliefs was found to be greatest among public school superintendents and principals. This group was found (see Chapter 9 of the *Experimental Mind in Education*) to be in strong agreement with Dewey's educational philosophy but very cool toward Dewey's underlying general philosophy—particularly those aspects of it which run contrary to conventional religious, moral, and epistemological convictions. This "double-mindedness" of public school leaders does not augur well for the organization of a concerted effort in the public schools to develop experimental educational programs designed to produce thorough-going experimental minds. Instead, it helps explain why attempts in this direction are usually short-circuited or side-tracked at the first encounter with deeply entrenched anti-experimental beliefs in the community.

The data also indicate that the cooperating public school teachers selected by colleges of education to direct the student teaching experiences of prospective teachers are in serious conflict with the experimentalist views of education professors. They tend to undo or pull against the efforts of the colleges to encourage experimental teaching behavior. After examining the data to this effect (Hayes, 1968), one of my colleagues recently remarked "We must either drastically overhaul our procedures for selecting and training cooperating teachers or abandon our student teaching programs altogether." In short, existing student teaching programs virtually guarantee that the next generation of teachers will be as bad (with respect to experimentalism) as the last one.

Even more alarming for the cause of the Experimental Mind is the finding that supervisors of instruction generally have great difficulty distinguishing experimental from non-experimental teaching behavior. We asked 972 observer-judges (which included supervisors of student teaching, public school cooperating teachers, principals, and supervisors, and college professors of both education and academic subjects) to systematically observe and evaluate the classroom behavior of 612 teachers (Brown, 1969a). It was found that:

1. Observer-judges tended toward only moderate and mixed agreement with experimentalism, saw more non-experimental than

experimental teaching, and yet they rated teachers, on the whole, "very good" to "excellent."

2. Only the observer-judges who are consistently in high agreement with Dewey's philosophy seemed willing to give "poor" ratings to teachers—and to those whose behavior was predominantly non-experimental.

3. All other observer-judges were unable to distinguish experimental from non-experimental classroom behavior, and seemed willing to accept even the most shabby teaching performances as "good."

4. Public school principals, supervisors, and teachers, who were the least experimental in their beliefs, saw the most experimental teaching and liked what they saw.

5. College professors of education, who were the most experimental in their beliefs, saw the least experimental teaching, and tended to dislike what they saw.

It would seem that teacher education institutions should place greater emphasis in their programs on bridging the theory-practice gap. Teacher education programs seem to have relied too heavily on the assumption that all one has to do is to tell or show prospective teachers what to do and they will do it. Then, we wring our hands and shake our heads when they don't do it. The fallacy of this assumption is that it fails to realize that beliefs must be congruent with behavior, and that fundamental philosophic beliefs must be congruent with educational philosophy in order to establish congruency of teaching theory and practice.

Observer-judges in education tend to hold underlying philosophic beliefs which run counter to the kinds of teaching behaviors they believe are good. When these two levels of belief are in conflict, behavior tends to agree with the more fundamental philosophic beliefs. This being the case, they have no alternative but to see behavior as being different than it is, their own as well as others', because they want or need to identify themselves with what they have learned to believe is "good" teaching. For example, almost everybody connected with education believes in providing for individual differences among students, yet very few ever do it. Therefore, they are anxious and willing to see almost anything as providing for individual differences—thus, saving themselves and the teachers they observe and judge.

Training in and utilization of instruments for systematic observation of classroom behavior, such as the *Teacher Practices Observation Record*, holds much promise for exposing and correcting the self-delusions which characterize the theory-practice gap in both pre-service and in-service teacher education programs. To this end, it would be helpful to state all viable educational philosophies or instructional theories in the form of observational systems in order to tell when and if they were realized in the action of the classroom. Likewise, it would be helpful if all observational systems could be easily and accurately translated in terms of underlying philosophic assumptions.

There is some basis for believing that teacher education programs could become more effective in bringing about more experimentalism in teaching practices if they would concentrate more on the development of logically consistent relationships between theory and practice rather than by propagandizing for or against specific practices themselves. Pushing the cause of certain "do's and don'ts" in the absence of philosophic considerations leads only to the development of a meaningless bag of teaching tricks and technology. Even though they may perform such tricks well, teachers so trained never quite understand what they are doing or why. Given avenues on which to move intelligently back and forth from beliefs to logically connected practices, educational change is able to move in knowable directions rather than drift willy-nilly.

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OLD WINE IN NEW BOTTLES

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In our life time we will see developed several new institutions in our society. They're not destined to be created overnight, of course. That's not the proper gestation period for institutions. It's doubtful if we live long enough to see the institutions completed. Institutions develop originally from highly prized, patterned responses to public needs that are widely or universally experienced. My first statement about the invention of a new institution is probably overdrawn, for all the qualified needs and responses I can think of are already adequately institutionalized; the existing models are less likely to be replaced than they are to be changed in some fairly dramatic ways. The ensuing creation of new roles and relationships and the disappearance of others may simply make the institution look new.

The even more dramatic changes that Professor Hutchins ruminates about, e.g., the wholesale disappearance of the phenomenon of work as we know it, are another generation or so beyond the prediction I make. The problems, however, are nonetheless real, and because of their proximity are perhaps more crucial.

To illustrate this manner of institutional change I should like to use the educational institution in our culture and, more particularly, to focus on the public school aspect of that institution. (Happily my illustrative material coincides rather well with the assignment I've been given in this instance.) Furthermore, due to my own specialization, I am confined to the secondary school and must draw most heavily on social studies within that school. The very fact that now I feel I must apologize for these limitations is predictive of one aspect of this impending institutional change. Let me develop that particular point a bit further.

I shall hang my development on a generalization, part of which I will try to support and part of which will remain largely unat-

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tended due to my colleagues' prerogatives in this morning's troika. The concept of teacher will evolve and emerge as a new role in the school. Most students will enjoy the services of only one teacher in any given time segment, e.g., corresponding to our term, semester, grade, or year. This teacher will be solely responsible for the educational growth and processes of his students. He will guide them, counsel them, teach them, evaluate them, and eventually pass them on to other teachers who will continue the educative process with them. At the service of the teacher will be a number of specialist functionaries who will provide for the students, at the request or assignment of the teacher, specialized instruction in limited facets of their development and efficient access to important educational tools, e.g., mathematical facts and skills, language skills, science information and procedures, historical information, social science concepts and methodology.

The functionary roles in this quick description are easily recognized. They relate largely to what we now call subject matter teachers in the secondary school. In the changed institution they will be recognized as subject matter specialists who are capable by experience or training to translate the several knowledge tools of the culture into the language that will fit the psychological experience of young students. Their task will be to assist the teacher in his professional work, to supply him and his students with the technical and informational attributes of the culture. In their own right they will be respected para-professionals who are heavily involved in the learning processes of the young. In our more magnanimous but forgetful moments they may be referred to as teachers.

Other functionaries will operate in this new institution. Much of its work will be centered in large structures where many of the technical facilities will be housed, groups of students may meet over extended periods, special services may be performed, records kept, and the like. Such an organization will require management and custodial services to provide for efficiency and smoothness of operation. Some of the tasks performed now in such roles as principal, superintendent, and business manager will most certainly be continued in the new institution, but likely the role with the greatest continuity will be that of custodian.

But in this new institutional setting it is the teacher who is king. It is the teacher who defines and assigns the work for his students.

He selects the knowledge packages, makes the diagnosis of skills needed, determines the requirements, and evaluates the progress of his students. The teacher decides when a student or a group of students is ready to transfer to the care of one of his colleague teachers. More important, it is the teacher who will teach the students. So sensitive and important a role this that none other in the institution, none other in the society will be allowed the privilege or trusted with the responsibility of its performance.

The role that I call teacher in this prediction is an unusual concept in today's secondary school. In some ways the role fits the description of today's elementary teacher. There is, e.g., the idea of concentrated responsibility. Each student sits at the feet of only one teacher who assumes an exclusive role in his education. The teacher is like today's guidance counselor who helps the student select from a list of useful experiences available to him, ameliorates the student's personal and educational problems, and offers advice on career choices. The guidance function as we know it will be absorbed by the teacher, though there will be available to him the services at both ends of the guidance continuum, i.e., filing and record services and depth counseling.

In other respects the teacher is like the best elements of an entire teaching team. Though lecturing would be of minimal use to him, he will possess an interest in being able to state a point of view effectively to his assembled student clientele. His two strongest suits will be his abilities to conduct small group discussions and to guide individual inquiry. He will possess a sophisticated amalgam of skills now identified with group dynamics, sensitivity training, T-grouping, and discussion leadership. He will be a trained counselor. In addition, if he so chooses, he also may be a subject-matter specialist. It would seem quite appropriate for him to make use of this route as a step in his preparation as a teacher. Learning a subject in depth would afford him an appreciation of the contributions of subject-related knowledge to the society, permit him an exposure to research techniques associated with a discipline, and offer him avocational relief from his rigorous duties as a teacher. Also, it would allow him an earlier access to the educational institution where he could test his own predisposition to be a teacher and, in a limited way, his ability to relate positively to the human breed of student. Not to be overlooked would be the possession of a vocational cre-

dential to fall back on in case his further training as a teacher turns sour.

In many respects this concept of the future teacher entails the coalescence of talents and skills already identified among educational paraphernalia. It simply invests them in the system via a different value structure that tends to invert the power and responsibility structure.

One other major characteristic of the teacher needs to be emphasized due to its special importance in matters commonly known as curriculum. The primary function of the teacher in the new institution is the conduct of student-oriented inquiry. Inquiry is problem centered with a problem-solving intent. Student-oriented inquiry, then, must occupy itself with the dilemmas that are real and crucial to the students who deal with them. A personal attribute of the teacher is to be sensitive to and accepting of the problems that occupy the attention of students. The professional skill associated with these attitudes of sensitivity and acceptance is that of teasing out of student discussions the issues that need examination and resolution. In our present teacher training programs there are simply the assumptions that the good teacher has some inherent interest in students' concerns and will in some manner attend to them. We have not in any systematic way built any kind of sensitivity training into teacher education programs; nor have we systematically tried to train teachers in the moves and maneuvers of teasing out and testing issues. We know so very little about either of these procedures that our hesitancy has the appearance of being justifiable. But given the experiences gained at Bethel, Maine, on the one hand, and the logic and language studies of men like B. O. Smith at the University of Illinois, on the other, we can no longer enjoy the bliss of total ignorance. The future teacher I'm talking about will be given these characteristics.

It would be useful for us to speculate on the kinds of problems that the teacher and his students would deal with in tomorrow's educational institution. I would classify these under three main headings: 1) Problems of personal growth, 2) Problems of citizenship, 3) Problems of world relations. Let us examine each of these in a little more detail.

In a recent series of group discussions, successful high school students in a large city were asked to assess the functions of the

school as they see it. Students' expressions were then grouped in broad classifications. The emphasis and attention given the categories by the students suggested that they would rank personal and social development as the most important purpose of education.

Students remarked that schools should strive to build well-rounded persons who can function and communicate in a variety of social situations. At the very least, the school provides the context in which social choices and contacts can be made and social skills developed. In particular, school should develop or reinforce student's ambition. School should also strive to develop potential leaders who care, who know what is going on, and who take an active part in life. In sum, these students appear to be saying that school should produce persons with the skills of involvement, participation, and leadership.

The implication of their expressions would seem to be that an appropriate concern in the school would be a more systematic attention to particular aspects of personal development. Our present assumption appears to be that personal development attends academic progress, that if we emphasize the academics in school work, personal growth will surely follow. But these interviewed students were unanimous in their request that school should attend first to personal development and second to academic development.

Certainly, one aspect of this personal growth process is the examination of problems that students themselves face concerning such things as getting along with others, earning and spending money, choosing and judging teen-age temptations that affect mental and physical health, forming attitudes toward race, religion, politics, sex, love, marriage, and other salient elements in the teen-age culture. In a recent questionnaire over 2000 high school students were asked to indicate what their friends talked about most outside of school and what general attitudes were expressed toward these matters. The intention of the items was to see if students in different cultural settings differed in their attitudes toward such important questions as the war in Vietnam and using marijuana. What was really found out was that outside of school students in neither setting talked much about any of these important matters. They apparently talk mainly about themselves and what they are immediately experiencing. The implication is similar to that inferred from

the interview with students mentioned before. In order to increase the effectiveness of school in the development of personality, the teacher must not only try to expand the interests of students into the "important" questions of human affairs but must endeavor to invade the real world of the teen-ager and teach him to deal with his personal "hang-ups" rationally and reflectively. The supposition is that with reference to the personal development of students the topic of "making out" may be more immediately useful than the topic of "fall-out."

The problems of citizenship have taken on a new poignancy among students. By all odds the poignancy will increase rather than subside in the years to come. In large measure what has started happening with dissatisfied students in school has precipitated my hypothesis about tomorrow's new educational institution. I see student disaffection as having two complementary locations with at least two general overt behavioral responses. There are likely a number of sub-categories in each of these parts. The two locations of disaffection are the school and the society. The two behavioral responses are withdrawal and activism. Thus, for example, a student could express his disenchantment with society in general by withdrawing into hippiedom. Or he could express his disenchantment with school by actively complaining, demanding, sitting, demonstrating, striking, or generally tearing up the place. The withdrawing dissident who eventually drops out or is pushed out of school has had some effect on schools and will probably continue to attract the concern of school people. But it is the activistic dissident who will precipitate the important changes that I have predicted here.

As was suggested earlier the disaffection is depicted here as having two locales. In a recent interview one group of students emphasized the society location. A serious consequence of the way school is managed, according to these students, is its lack of relevance to the civic and social culture. Mostly, these students were complaining about their own lack of involvement through the school in civic and social affairs. School should help them get involved in more practical work, should allow them to be more closely related to the society that is the context of school, these students seemed to be saying. Students should become more involved in problems beyond the classroom to make their studies more relevant.

The school itself as the particular locus of dissatisfaction is emphasized in the following report and interpretation of black student demands and complaints in a typical Illinois metropolitan school. These students' feelings finally erupted as a full-blown boycott against existing school policies.

> Without question there is a new era of student involvement in school administration. Schoolmen having long since accommodated themselves to the involvement of the lay public in the operation of schools, now face the new insistence of students that they too have rights of policy involvement. There is little doubt that any conceivable resolution of this new problem other than the complete negation of claimed student rights will result in some reduction of what is now claimed as professional authority in policy formation. It is possible that student power will encroach on many aspects of school, e.g., administrative policy, curriculum decisions, and teaching methodology. At this point, it is uncertain that student involvement in any of these areas would be wholly untenable or without merit. Educational authority is a social concept, and like educational theory and practice, is responsive to the social milieu in which it exists. In short, if the tenor of the era indicates a larger involvement of youth in the affairs of the society, then schools must devise means of accommodation both for themselves and the larger society. It is not the view here that schoolmen should be required to preside over the complete vulgarization of their institution. But it is the view here that students, both black and white, have an emergent right to a voice in the conduct of their own educational experiences. It is a new role of the administration and faculty to devise the means to legitimatize that voice and help define its focus and limitations.

The relevant point to be inferred from these two situations is that tomorrow's schools will be more student oriented than anything we have imagined heretofore. One aspect of that orientation will be the school's fierce involvement in two aspects of political socialization. Students under the guidance of their teacher will be seriously involved in the important problems of the civic culture. At

the same time students will exercise increasing power in the management of their educational institution. The key concept is *involvement.* No academic sterility here. Problems identified and reflected upon and inquiries made will produce decisions and actions by the students and their teacher which will, as a consequence, affect both the institution and the society.

Even with all its significant involvement in the personal problems of youth and the social problems of the civic culture, these future schools, teachers, and students will not ignore the super problems of the world. But their examination will only slightly resemble our present school treatment of cross cultural problems.

Two aspects of problem treatment will be increasingly emphasized in the new school. First, in the real world, problems are always dealt with by interested and designated agents who represent in the inquiry a diffused grid of loyalties, attitudes, predispositions, biases, and values. Solution decisions to world problems always reflect expedient and sometimes debilitating compromises. They often result in the negation of some points of view which appear alien to a favored solution. Second, solutions to any problems entail value choice. We have come more and more to recognize that the choice and justification of the criterion values in the construction of solutions is nuclear in problem solving.

In the new school, the treatment of major world problems which loom beyond the effects of classroom decisions will reflect the dual aspects of roles and value adjudication. It is not to be implied that the teacher and his students will make use of these treatment strategies only with the gargantuan problems. Role behavior and valuation will be nuclear in the considerations in the personal and civic domains, also. But those domains possess consequential elements such as personality development and public action that will be given priority emphasis.

The ideas of role playing, already well developed in the literature by persons like the Shaftels, and simulations, also developed to high levels of sophistication in such games as Guetzkow's *International Relations* or the Foreign Policy Association's *Dangerous Parallel,* will figure heavily in describing the concept of role behavior in the new school. In such situations students will learn to negotiate the delicate but powerful interplay of values, roles, refer-

ence frames, and private preferences in composing needed solutions to complex problems.

In this statement I have attempted to support three major points relative to the education of youth. First, I have tried to make a case for a problem-centered curriculum in which students can inquire freely into their own dilemma-tumescent lives, can become rationally involved in the affairs of their school and the larger society, and can learn to negotiate the more horrendous cross-cultural difficulties of their world. Second, I have tried to compose a concept of school where such relevant inquiries can be conducted. And third, I have attempted to impose on this context an expanded concept of the manager of these affairs, the teacher. I have further suggested that few of the ingredients are new. They comprise an ancient fermentation. Only the bottles appear new.

REFORM FROM WITHIN

WILLIAM CLARK TROW*

While it is generally agreed that present-day American education is remarkably good, it is still not good enough. Critics, both lay and professional, intuitive and empirical, have pointed out its many shortcomings and have prescribed their favorite remedies. But the criticisms are based on value judgments of some one aspect of education, and hence the recommendations for reform are similarly one-sided. Even reform measures based on research studies follow the law of the single variable, compare resultant change in, say, student performance or attitude, with that found in what is considered to be "the regular" school program.

Thus whether the reform involves programming, team teaching, television, modules, or computer-assisted instruction, the results are often discouraging, since, as should have been expected, all the other traditional environmental variables continue as before. The innovation has little chance against their combined influence, especially since it may itself be operated none to expertly. We should waste no more time on this stupid procedure.

What now seems obvious is the need for a change in the total *pattern* of instruction so that each of the innovating variables will be operating in relation to the others. Such mutual interaction can in part be predicted, though corrections will have to be made, the process commonly referred to as "getting the bugs out."

In advocating multivariable innovation I shall present a series of four postulates, as the matter relates to this Society, followed by a series of six theses. At this stage and for this audience, any elaboration of the postulates is unnecessary, though for the theses some clarification will be needed. If the postulates are accepted, the theses could well be incorporated as projects in one or more selected schools for trial runs. This should not be attempted, however, until careful plans are laid and the participants have undergone a period of instruction and special training. But first, the postulates:

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Postulates for Educational Reform

1. NSCTE is a *professional* organization. While it favors research and the ideals of a liberal education, these are not its prime concern.

2. As a professional organization, the function (or role) of NSCTE is to improve educational practices. This is done (through its publications and in other ways) by improving (a) educational procedures in the schools, and (b) the preparation of teachers and other practitioners.

3. At present both functions are less effectively performed than they might be. The reason for this lies in such external conditions as social and technological change, and in such internal factors as disinterest, tradition, formalization and multiplication of courses, and satisfaction with patchwork innovations.

4. A thoroughgoing educational reorganization is now needed. The form this organization should take is a matter of opinion. I support a coordinated multi-media approach as outlined in the following six theses, which I hereby tack on the doors of the NSCTE Cathedral of Learning:

Theses for Educational Reform

1. Specification by teachers of the performance objectives of whatever content they teach.

2. Skillful use of appropriate methods and media fitted into the development and utilization of modern educational technology.

3. Differentiation of instructional roles.

4. Adaptation of instruction to the individual differences of the students—physical, intellectual, and cultural.

5. Modification of educational evaluation and student classification procedures.

6. Sequence and continuity in the instructional program.

Instruction *might* be improved if only one or two of these theses were followed, especially the first; but the operation of all six in a system is the minimum we should expect. Furthermore, they relate to programs of teacher training as well as to instruction in the schools. We cannot continue to employ old-fashioned procedures in preparing teachers for the schools of today and tomorrow, nor can we fail to use our influence to help bring about the needed

reforms. By way of clarification some of the implications of the six theses are here indicated:

1. *Specification by teachers of the performance objectives of whatever content they teach.* On the face of the matter it seems reasonable that students should know what it is they will be expected to be able to do as a consequence of taking a course or "subject," and further, that they be taught to do it. Yet this information is very difficult to obtain, in part because it is usually couched in terms of generalized values such as "to know," "to understand," or "to appreciate," or "the ability to" apply, generalize, deduce, and the like. Furthermore, examination items are kept secret on the assumption that if the students know what it is they are expected to learn, they can learn it.

Instead, the objectives should be specific and clearly stated, the directions being couched in such behavioral terms as discriminate, describe, demonstrate, construct, draw, list, etc.,—always assuming that the students are to be *taught* to do these things, not merely to be examined on them. As in motor skills, they might be stated in temporal or spatial units, or, in the ability to handle progressively more complex concepts and their relationships. The behavior expected is what serves as an indicator of the presence of the more generalized values. Naturally other than cognitive goals are to be considered—attitudes, for example. The means employed to attain them can be carefully charted, and the evidence of their attainment sought.

2. *Skillful use of appropriate methods and media fitted into the development and utilization of modern educational technology.* It is no doubt an enlightening experience for a teacher to program a unit of instruction, or to bring in a motion picture film where none had been used before, or for a school to acquire a language laboratory or a TV set, or hire a couple of teachers and call them a team. But it is not educational reform, which must be much more thoroughgoing. As a start, objectives must be established and hypotheses must be set up as to the best methods and media for the attainment of those objectives for different parts of each course in the curriculum. There is no need, however, for three teachers when one, or a videotape will do the job. On the other hand, more should not be demanded of a medium than it can produce. Teachers need

training in the selection of the most effective methods and media for different purposes and for their utilization.

3. *Differentiation of instructional roles.* One of the fruitless educational quests over the years has been that for a description of "the good teacher"—and "the poor teacher." Whether the description is couched in qualitative or behavioral terms, there are too many ways to be good or poor. Instead it would be better to find where a teacher's talent lies, develop his skills there, and relieve him of responsibilities in areas where he is less successful. By tradition a teacher is a generalist, not a specialist, but some specialization has crept in largely by way of self-selection, particularly in subject matter departmentalization, and also in grade level, but more is needed.

As has often been pointed out many of the routine and housekeeping tasks required of teachers can be done just as well or better by non-professional personnel. But in addition to this I would suggest that there are three quite different teaching jobs: explaining, coaching, and discussing. Few teachers can do more than one of these well, yet all teachers are expected to do all three. *Explaining* is lecture-demonstration, which can often be best done on film or tape since details can be carefully worked out and the voice can be supplemented by well-chosen displays. A teacher with this talent is a great improvement on the sad but all too familiar efforts to "explain things," motivate students and arouse their interest. *Coaching* is monitoring, directing, improving the learners skill in the performance of some task, employing Skinner's principle of progressive approximation through pacing and reinforcement. *Discussing*, that is, leading discussion, may take the form of teacher-pupil planning, or may be an effective means for heuristic learning, instead of a technique for sharing ignorance. If successfully handled, it includes developing skill in debate, conference, and committee work as well as some instruction in the logic of argument and its fallacies.

4. *Adaptation of instruction to individual differences—physical, intellectual, and cultural.* Efforts to individualize instruction, of which the most effective were probably the Winnetka and Dalton plans, have never been particularly successful because of the lack of materials and adequate techniques. So instead, children are still graded by chronological age or in other ways, and the consequent

evils are taken for granted and even projected onto the pupils themselves. The situation looked hopeless in part because of "the wandering IQ," and in part because of the wide differences in educational opportunity. Now, with the discovery of the disadvantaged youth especially of the inner city, the problem has become more acute. We are paying for our neglect of the concept of readiness, and frantic but sporadic efforts are being made to do what should have been done for years, namely, to conduct diagnostic placement testing (Gagné) and to provide the kind of experiences, direct and other (pictorial, verbal, numerical), which are needed to attain the educational objectives sought.

Fortunately, films, videotapes, and programmed instruction, with and without teaching machines, are now available to take care of special sectors of learning that do not call for group interaction or are not well adapted to group instruction. Their use, if made routine procedure, would eliminate many of the present difficulties.

5. *Modification of educational evaluation and of student classification procedures.* Present practice employs extremely coarse methods of screening in its grade-placement system, sometimes modifying it by different forms of grouping. As a consequence, one of the basic tenets of teaching has been disregarded, i.e., starting instruction where the student is. Instead, the system of grade placement subjects the child to a blind machine-like operation: the grade (or subject or course) a child is in determines what the school will try to teach him instead of the student's abilities and previously acquired competencies. The vague criteria for promotion, coupled with the marking system, have got to go. It is stupid and unjust to continue placing children and young people in situations where they are bound to fail on tasks to which they are thus arbitrarily assigned —or where they must spend much more time than they need to acquire the required skills and abilities. Most of the undesirable and troublesome pupil behavior is the direct consequence of this malpractice.

There is no reason that children should not continue in the same home room for years, but only if they meet individually, or in groups or classes made up of those who are at the same level of development in a particular content area, with curriculum and assignments adapted to that level. The ungraded school must be de-

veloped to take the place of the present barbaric system of grading and marking. The changes can be brought about, however, only if sequential behavioral objectives are definitely specified and students are marked not in comparison with what others do, so as to get a distribution, but according to the progress that each makes individually in attaining the sequential objectives, i.e., criterion-referenced rather than norm-referenced marking.

6. *Sequence and continuity in the instructional program.* The chopped-up instructional program likewise needs to be overhauled. The differentiated curriculum and the elective system succeeded in breaking the stranglehold of the rigid classical curriculum, but the present system of interchangeable parts, in which one credit (or credit hour) can be replaced by almost any other, carries things too far. It is an impressive monument to administrative convenience. A student may go on taking a pinch of this and a spoonful of that for a number of years, and then all that is needed to make him a graduate is an adding machine! For special job or promotion requirements, all he needs to do is to show that he has "had" so many credits of this or that, whether he knows anything about them or not.

Instead, some rational continuity of content in line with the specified educational objectives can and should be mapped out. (If desired, a distinction can be made between required *mastery* of certain necessary skills and abilities at different levels of proficiency, and a sampling of content directed by the students' individual interests.) Thus with criterion marking, the student can see his own progress during a course or a year, and he will be ready for the next that follows it sequentially.

The art of teaching is in about the same state as was the art of war in the 15th century when the Roman legion had been supplemented by the English longbow, the crossbow, and the innovative gunpowder. Educationally we now have other instruments—the equivalent of the tank and the airplane—which we try out now and then, but we put our trust in the old weapons and an occasional cavalry charge!

It is high time in the war on ignorance that we throw out the archaic and the obsolete and train our soldiers, the teachers, in the use of modern equipment. And it is high time we banished the futile laissez-faire procedures of the past, using whatever instrument

appeals to us in a succession of scattered raids, and instead, develop a coordinated attack on all fronts. The war on ignorance is no petty quarrel between rival principalities; it is a struggle for survival.

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"THE LEARNING SOCIETY"– THE OTHER SIDE OF THE COIN

FREDERICK C. NEFF*

I

There have been few times in human history when education has received the thoughtful attention of concerned and dedicated people that it is receiving today. The theme of this conference is derived from one of those people, whose challenging views deserve serious consideration, whether one is in agreement with them or not. In his vision of a "learning society," Robert M. Hutchins argues that education must begin preparing for a time when "we shall find ourselves largely without work as we have understood work in the past." He believes that "For the educational system the transition from a working to a learning society means a drastic re-orientation of schools, colleges, and universities away from jobs and toward intellectual power."

Although there is some merit in Mr. Hutchins' proposal, what may be overlooked in the advocacy of a transition from working to learning is a basic fallacy in the premise, viz., that working and learning are not mutually reinforcing but dichotomous terms. The architect works to achieve a master plan, the draftsman works at his drawing board to implement its design, and the laborer works to bring the edifice into being. Skilled surgeons, violinists, writers, artists, and sculptors all work in various ways with their hands. It will scarcely do to say that the skill with which they ply their work was not learned, or that they do not continue to learn better ways of performing as they practice their crafts. To hold, on the other hand, that learning is not for the purpose of doing, working, or performing in reference to some skilled or creative act would be to deprive learning of its purposive function or end in view. Learning is not an abstraction. *To learn is always to learn how to do something.* Whether a learning society is a worthy society is ultimately to be

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measured, not by the mere fact that it is learning, but by *what* it is learning, by the *purposes* for which it learns, and by the *criteria* it uses in assessing such purposes.

This brings us, of course, to the age-old question of aims, which, in turn, hinges upon whether they shall be viewed as universal and transcendental, as Hutchins has been wont to argue, or as contingent upon present and probable future states of human affairs, as suggested by Dewey. It seems paradoxical, at least, that Hutchins should so long have claimed a kind of transcendence in regard to educational aims and now urge that they reflect the current and forthcoming technological upheaval in the social order. Lest it be presumed that Mr. Hutchins had suddenly become a relativist and that his educational values were culturally derived, I venture to suggest that what he is really saying is that the kind of intellectual training of which he has long been an ardent advocate is at long last giving promise of coming into its own, not as a luxury but as a necessity. I suspect he is further saying that despite—not because of—the job dislocations and eliminations that a highly technological society may bring about, education should be primarily concerned with a cultivation of those universal ends that are oblivious to the changing materialistic conditions of the social scene and that are impervious to time, place, and human conditions.

It is only realistic to recognize that science and technology are becoming an increasingly integral part of our daily lives, and it would be a woefully short-sighted view of education that failed to reconstruct itself accordingly. But is Mr. Hutchins' brand of reconstruction what we want? For those acquainted with his earlier writings, it is not difficult to detect in his proposal the familiar Hutchins thesis, borrowed partly from Plato and Aristotle, that true education pertains to a cultivation of the intellect, that labor is necessarily menial and degrading, and that this is so because, philosophically speaking, the mind and the body exist in separate realms, with priority assigned to the mind. One cannot but question whether it is not this very bifurcation of mind and body, of the "cultural" and the "practical," of the academic-minded and the hand-minded, of the humanistic and the scientific, that has resulted in what C. P. Snow has called our "two cultures" and which has but served to widen the breach between the artisan and the artist, between the technologist and the poet, between the philosopher and the activist,

and between the intellectual and the average man. The shearing away of values from the activities we engage in, on the one hand, and the isolation of values from their connection with what we do, on the other, have led to a kind of schizophrenia in regard to a proper relationship between thinking and doing as well as between "ordinary" thinking and doing and "intellectual" thinking and doing. At a recent conference at Princeton University, the British M. P. Brian Walden referred to "the increasing divergence between what intellectuals do and think and what ordinary people are doing and thinking." His observation was also that there had been a "complete collapse of liberal values" at their origin and that the "framework in which the ordinary man now thinks" has virtually no relationship to liberalism, or indeed with any values.

II

Mr. Hutchins quite properly reminds us that, in an increasingly technological and computerized society, many of the vocations which were earlier in demand are going by the boards, and that future generations are going to be faced with fewer and fewer of the traditional kinds of job openings. He urges that the curricula of our educational institutions, in order not to prepare students for outmoded or nonexistent vocations, ought to take account of these changing conditions. But the rather handy conclusion that soon most people will be "learning" and few will be "working" I find too simplistic a resolution of the issue. In the first place, although a great many of the vocations for which we have prepared and may still be preparing young people may no longer be in demand, this is not to say that we shall ever become a completely mechanized society, nor is it to say that the bulk of the professions—law, medicine, education, the ministry, economics, politics, and so on—is likely to become obsolete. Moreover, the creative work that is required in music, drama, painting, poetry, sculpture, and so on is not likely to be displaced by technology. Productive work will probably always be in demand wherever scientific discovery and invention are concerned, and the work of the imaginative mind will become increasingly prized as such slide-rule skills as calculation and simple logic are taken over by machines.

In the second place, there is a strong and highly prized relationship between the dignity of labor and social values. From the

simple carpentry of Jesus to the architectural designs of Lewis Mumford, from the geometry of Euclid to the mathematical physics of Einstein, from the epic poetry of Homer to the obscure imagery of T. S. Eliot, from the majestic works of Beethoven to the cacophonous works of Shostakovich, man has valued and respected the worker—be he inventor, discoverer, physician, poet, mathematician, musician, actor, or physical laborer. Although he may occasionally have feared or envied them, man has habitually failed to respect those who do nothing, or who are merely "aristocratic," or who are too lazy to work, or who don't have to work, or who do no more than cultivate their intellects and contribute nothing to the well-being of others. Lewis Terman, in his *Genetic Studies of Genius,* assumed the equivalence of genius and a high intelligence quotient. In his later years he acknowledged that these were not the same, that persons who merely "sit" with a high IQ are not geniuses, and that the term "genius" should be reserved for those who have demonstrated a *productive* intelligence. Some philosophers—among them Gilbert Ryle and R. S. Peters—have recently argued to the effect that intelligence is not an inner entity which manifests itself outwardly, nor simply that it is continuous with its expression, but that it is to be identified precisely with its product. This would amount to saying that Beethoven's genius, for example, resides *in* his compositions, or Picasso's *in* his works of art, or Hemingway's *in* his written works, for here lies the only basis for calling such men geniuses. Although virtually every society has esteemed its productive members, the free society has seen fit neither to enslave nor to patronize them, but to dignify their efforts by granting them independence and increasingly higher degrees of autonomy. One cannot but wonder, accordingly, whether the proposed shift in emphasis from working to learning would actually constitute no more than a realistic attempt to adjust to technological change, or whether, if seriously and thoroughly undertaken, it would threaten the very foundations of our social values and our social order.

In the third place, aside from the social recognition and rewards that accrue to work, what is to become of the human need for self-respect that is engendered by a sense of accomplishment from a job well done? The boredom of the idle—be they rich or poor, learned or unlearned—is a poor substitute for the zest that comes from undertaking, working at, and successfully completing

difficult and worthwhile tasks. We are urged to reorient education "away from jobs and toward intellectual power." But what is the significance of intellectual power except as it is utilized in working out more humane ways of living in human association? Moreover, if our educational system is to retain a semblance of its democratic structure and outlook, can it afford to overlook the fact that not every youngster is capable of profiting from an exclusively "intellectual" kind of curriculum? There are many kinds of intelligences—mechanical, manipulative, clerical, as well as creative and abstract—which represent the diverse capacities, needs, and interests of the free, multi-group society. To single out but one kind of capacity, to attempt to limit all learning to a strictly "intellectual" variety, would be to ignore the rich and varied supply of talents and aptitudes that American youth represents. It would be an ironic twist to discover that the technology we have spawned—a technology that purportedly enables us to realize virtually every end we set up—is capable of usurping those very ends and of bending our historic goals to its will. Like a Frankenstein's monster, the technology which in many cases we may be justly proud of having wrought may now be threatening to take away from man his pride in accomplishment. What is apparently forgotten in this strange phenomenon is that the original purpose of technology—the easing of undue hardships and the bettering of human living—is in danger of being ignored, and the servant threatens to become the master. In the political arena, Washington satirist Anne Chamberlin recently referred to federal bureaucracy as a "governaut," which is "something with the personality of the Grinch and the momentum of the Seventh Fleet, only bigger"—a "self-generating monster which devours its creators, bursts out of the laboratory, and sinks the United States."

III

In times past, religious revolts, industrial revolutions, and technological shifts have been seen as portents of a better life. To be sure, there was often unmitigated suffering involved in the task of realigning one's faith, in temporary job relocations, and in adopting ways of production that were claimed to represent greater degrees of efficiency. But in all such historical phases there was the tacit assumption that, once the painful period of transition was endured, equilibrium would again be restored and a new era of religious, economic, and social stability would be ushered in. "Efficiency"

was the magic word, and whatever disruptions were necessitated in its name were presumed to be all for the good. For the purpose of efficiency our natural resources have in many cases been drained. In his devastation of forests and wanton destruction of wildlife, predatory man has often thoughtlessly disturbed the balance of nature. To facilitate the efficient flow of traffic, the beauty of a landscape yields to the construction of the superhighway. If it be efficient and profitable to industry, then the resulting contamination of our air, lakes, rivers, and streams—though perhaps unfortunate—will have to be endured. Even the gracious-sounding old telephone exchanges of LAwndale, FOrest, CRestview, PArkway, and EVergreen have given way to mere numbers—all in the name of efficiency. In order to live efficiently, modern man has increasingly reduced himself to a nameless and faceless blob. Today it is quite possible—indeed, almost routine—for him to have a house number on a numbered street in a city or town that is located primarily by its "zip" code number; to have attended a numbered elementary, junior, and senior high school; to have—in addition to a telephone number—a social security number, an insurance policy number, a license plate number, and a driver's license number; and to be buried in a graveyard plot that is identified by number.

Our cities, our industries, our jobs, our educational systems, and, indeed, our entire way of life have been geared to efficiency, so that efficiency has become almost a way of life itself. What we have neglected to consider is that to live efficiently is not necessarily to live effectively. Whereas efficiency has to do only with means, effectiveness represents taking into account the probable consequences—both immediate and long-range—in the service of which means are employed. Merely to live efficiently is to live at the superficial level of a sometimes questionable economy of time, funds, and energy. To live effectively is to live at the deeper level of perceived relationships, as well as to keep under continual surveillance the desirability—both individually and socially—of whatever we undertake to accomplish. While corporate enterprise, Madison Avenue advertising, and computerized living may represent the golden age of the efficiency expert, they do nothing to prod us to sound the deep wellsprings of meaning that life can afford. The average man has come to believe that the meaning of life is a matter of discovery; or that it is a commodity, like aspirin, ready-made

and available on request. He seldom thinks of it as something highly personalized, arduously wrestled with, and individually wrought. Even religion has too often become a big-business commodity-dispenser of ready-made ideas instead of the means for an honest—perhaps novel and unorthodox—resolution of human problems.

In science and technology we are daring innovators, whereas in morals we tend to be subject to the dominion of the herd. We have been spectacularly experimental in plumbing the ocean depths, in invading outer space, in conquering disease, and in devising all sorts of efficient means of communication and transportation. But in the labor of learning how to live in harmony with our fellow man—in our families, in our communities, and among nations—we have exhibited a sorry lack of aptitude. We have all but exhausted ourselves in the heroics of physical conquest, while our moral frontiers remain uncharted. Perhaps the ever-closer proximity of our megalopolitan populations of the future bespeaks a need, not so much for intellectual power, as for the fostering and development of sharable interests, human sensitivities, and mutual understandings.

IV

It has long disturbed me that so many persons are assigned educational status whose knowledge outstrips their ability to manipulate it in moral and humane ways. I have long felt that the hallmark of education is a reflective and compassionate attitude toward human beings and human problems. The truly educated man—as distinguished from the man who merely knows—is the man who has learned how to enlist his knowledge in the service of humane ends. We are not especially short on "intellectuals" today—indeed, it may even be said that we are burdened with them. But there is a difference between being intellectual and being cultured or civilized. Formal education—from the kindergarten to the graduate school—has emphasized what might be termed the "learning that" aspects of education. We have finally produced a generation that is perhaps over-equipped with knowledge, as no previous generation has ever been. But our surfeit of knowledge has apparently fallen far short of meliorating the psychology of the human predicament, and, despite our burden of information, we continue to fail in our attempts to realize our moral aims.

Whereas the intellectual may have "learned that" to an astonishing degree, the educated man is distinguished by the fact that he

has "learned how" to discipline his behavior in the achievement of reflected-upon ends. For what can be the purpose of education if it is not ultimately designed to render life richer, more livable, more decent, more humane? A study of such subjects as mathematics, astronomy, biology, history, music, literature, drama, and painting is truly educative, not because it adds to our funded knowledge, but to the degree that it contributes to the enrichment, enhances the dignity, and ennobles the purposes of life. By the same token, to be proficient or well-versed in technology, or to be expert in the field of international diplomacy, is not necessarily to be educated; but to have learned how to utilize technology in the service of effective living, or to have mastered the art of aligning diplomacy with the attainment of moral goals—this is representative of true education. Every science and every art reaches its greatest significance in its social bearing, for, like Dewey's conception of intelligence, the meaning of every human undertaking is ultimately social.

The literal-minded simplicity of the average sociologist or public moralist serves little purpose. Instead of listening endlessly to picayune answers to small questions, perhaps it is time to demand tentative answers to important ones. It is encouraging to discover that there are a few voices beginning to be heard in regard to defining the issue. Erich Fromm, for example, holds that "our problem today is technology versus humanism in both its religious and nonreligious forms." Fromm proposes the creation of a "National Council of the Voice of the American Conscience," which he believes should consist of about fifty eminent, dedicated Americans concerned to make technology subservient to humane ideals. What we are in danger of losing, Fromm believes, is a recognition of the social primacy of man. Perhaps the most serious danger to our social health is the threat of an irreparable cleavage between our technological prowess and our moral aspirations. Although there may be some who, like Miniver Cheevy, love the days of old and who would advocate a return to the "tranquillity" of some romantic and far-distant past, there are others who, like Fromm, recognize that the potential and long-range benefits of technology probably reach far beyond the present dilemma that it has created and that, once leashed and thoughtfully guided, it could be a true harbinger of progress. But it might be well to keep in mind that progress is not simply motion —as chewing gum proves.

V

What has been said here is simply an undergirding of President Bayles' challenge to lift teaching above the level of knowledge-transmission to the level of reflection and judgment. It means a moving away from mere efficiency toward an emphasis upon effectiveness. Instead of attempting to reduce our understanding of teaching to the mechanism of a science, it means the elevation of education to the dignity of an art. Science and nature may furnish the raw materials, but man creates the patterns. Because the road ahead is fraught with uncertainty, we need a new kind of teaching and a new kind of teacher. What will the new teacher be like? That we cannot exactly predict. But at least we know what we should hope he would be. The new teacher will be a free teacher—free to engage in such discussions and activities as wisdom of choice and consideration of consequences will warrant. From such discussions and activities tentative conclusions will be free to emerge which are justified by the play of intelligence upon the widest range of evidence that is available. The new teacher will be the embodiment of a mind released from fear, prejudice, and dogmatism; his will be a freed and humane intelligence engaging in such endeavors as a kindled imagination can open up for human exploration.

The new teacher will employ methods of instruction appropriate to the requirements of living in a world that is friendly to change. Because much of the insecurity of the past and present has been due to a forlorn attempt to fit fixed principles into a world that is moving rapidly away from their mechanistic counterparts, the biggest job of the new teacher will be to teach students how to live in a new kind of world—to teach them how to cope with problems that are yet to emerge in a world that is still in the making. A few years ago, in her book *The School in American Culture,* Margaret Mead put the problem this way:

> We need from the teacher who has relied on teaching how a tried method can be used on new material, a totally new kind of teaching—a teaching of a readiness to use *unknown* ways to solve unknown problems. We are facing a world which this adult generation is unable to grasp, to manage, to plan for. The most we may reasonably hope for is that somehow the old unsuitable methods will get us through until another generation is able to tackle the job. But throughout history, each generation

has stood on the shoulders of the past, each new learning has come from an old learning, if only by way of explicit rejection. How are we who do not know what to do, who do not know how to live in one world . . . who do not know how to carry in our hearts the weight of those who died yesterday in Burma or who may die tomorrow in Prague . . . how shall we, who are so unfit, prepare a generation which will begin to be fit to face the new problems which confront mankind? At first sight, it seems a hopeless dilemma, for men can teach only what they know. And yet it need not be, because what we need to teach is a technique which can perhaps be well communicated if we ourselves fully realize our own position. We need to teach our students how to think, when you don't know what method to use, about a problem which is not yet formulated. . . . So if we, who live now, can fully realize and incorporate into our every teaching word and gesture our parlous state, we will, as we transmit it to our pupils and students, give them just the freedom, just the sense of an unguessed-at process which nevertheless *must be found,* which, if they incorporate it, should equip them as no generation has ever been equipped to make the new inventions which are necessary for a new world. (p. 40)

When the educator and the scientist join forces in the formulation of common goals; when teachers, scientists, citizens, and scholars realize a just share in the greatest freedom that tomorrow's world can afford; when our great, common dedication is to a continuous extension of freedom among men; when education thoughtfully undertakes to ensure the mutual reinforcement of the scientific and the humane—then we may finally begin to realize on earth what our fathers thought to await us beyond the stars.

REFERENCE

Margaret Mead, *The School in American Culture,* Cambridge: Harvard University Press, 1951.

INSTITUTIONAL CONDITIONS FOR THE "LEARNING SOCIETY"

ROBERT E. MASON*

It is interesting indeed that this year when the President of our Society, Dr. Ernest Bayles, well-known as a leading pragmatist philosopher of education, arranges the program, we use as the theme the title of a book written by one who was once anathema to educational theorists representing Dewey. The two professors of education who have preceded me on the program this afternoon seem to have dissociated themselves from Hutchins' theory of mind and knowledge—Neff quite explicitly, Trow by implication. At the same time, by our very appearance on the program we affirm that we share with Hutchins concern about conditions necessary to the pursuit of learning.

I am not sure that the distinction rests in some sort of a disjunction between a dynamic and a static conception of learning. It is true that in different ways both Trow and Neff emphasize the importance of dynamic learning, thus insisting that learners do as well as think, act as well as contemplate. However, Hutchins will have his liberally educated men participate in politics—he brings them out of the study at the end. Yet he does not clearly work out the policy, assumed by Trow and Neff, that all men can participate fully in the learning society, and that social and political means and ends can be shaped by the entire community toward living of good lives in humane circumstances.

Where we agree with Hutchins, after all these years of mutual sniping, is in locating criteria of goodness in man in and for himself, in the context of shared experience. Our theory of man and learning is different from his, but we agree with him that man and learning source are the appropriate criteria of educational judgment. Consequently, with the differences, we join him in deploring con-

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ceptions of education as means rather than end, learning as instrumental to economic development, national power, or keeping ahead of the Russians. To the contrary, we remember Kilpatrick shaking his white mane, intoning in the southern drawl that he preserved through all the years in New York, "We learn what we live," and "The life worth living is the life good to live."

This way, we are tempted to entertain the possibility that community activists threatening teachers and encouraging young people to set fire to high school waste baskets, and campus activists shouting and acting out obscenities at our colleges do these things to protest the loss of the human criterion in education. There is the alternative possibility, however, that these goings-on in the extreme are conspiratorial, possibly to be assessed as political subversions in violation of the principle of continuity of means and ends. Such a possibility brings us to a painful dilemma, yet not unlike that faced by John Dewey, William Heard Kilpatrick, George Counts, John Childs, George Axtelle, Sidney Hook, and others in the years before mid-century. Today we hear the shouts of community people and angry students that they will forward violent revolution to force participation.

Five and six years ago I thought the slogans of participatory democracy were beautiful to hear, and I opted for it. Then my city burned for three days and the white youths on campus turned to the cultivation of ugliness in word and deed as means. As days of terror have ensued in the schools of my city, and as students in my university have tried to maneuver me into a crusade for foulness in the name of free expression, I am impressed that we must cleave to intelligent method most of all, and I am reminded that we have learned to learn by so doing. The learning society is one in which we participate by ordering our problems, by the process of clarification, analysis, data gathering, intelligent criticism, and adjudication of means and ends in the light of available evidence. Here is embodied all of human hope and aspiration. The learning society is the society in which we are alive and free.

As educators, we are now called upon to risk to enforce the principles of order which sustain the learning society. But since once upon a time we thought a meeting at Port Huron did indeed promise a good crusade for greater participation by young people in the enterprise, and since we recognize the sin of racism in our-

selves and in our institutions, we want justice and order, deliberation and criticism, agreement wrought out of honest dissent. Of course, this is painfully difficult, and we experience anguish in mediation. But such steady, long suffering is the very mode of our occupation, and orderly adjudication of such tension is the distinguishing mark of a learning society.

In this spirit, then, let us venture a re-statement of principles of educational order which should guide us in current controversies with a so-called "New Left" practicing methodologies not much different from those of the old. In thus denying originality to the New Left—white and black—originality is disclaimed in stating principles of democratic order. Our President as well as his mentors, Boyd Bode and John Dewey, have done it before. The following is intended to be consistent with their teaching, framed in ten propositions proposed as necessary procedural canons which must be observed in order for the good things proposed by Trow and Neff to be implemented in our schools and colleges.

1) The supreme purpose of deliberate education, to which all other ends are subsidiary, is to produce good men and women.

2) Although good education cannot be maintained in a totally bad society, it can survive elements of rottenness if the community includes some elements of healthy growth.

3) Schools should express the best of the life of the community in persisting effort to reconstruct ugliness and corruption.

4) Intellectual activities in the school should constantly emphasize the use of subjects to this end; in this sense the intellectual disciplines are means not ends, and the ends are moral not intellectual.

5) This way, ordering of means and ends is intrinsic to education; education is ordering.

6) Inasmuch as order is characteristic both of intellectual and moral discipline, the school in all aspects should be an orderly place. The school's primary activity is that of ordering.

7) The expertise of teachers consists in ordering various domains of means-ends relationships. Their authority derives from and resides in such expertise; consequently, they may not delegate it.

8) The authority and responsibility of teachers to exemplify moral and intellectual discipline is categorical and not susceptible to challenge inside the gates of the educational institution. Thus, attempts to obstruct the processes of discussion and criticism by which such discipline is exercised can be given no quarter.

9. The responsibility of students, parents, and all people of the community to question, challenge, and protest outside the gates should be defended as inalienable.

10) The rules of procedure emphasizing the constitutional democratic tradition of Western civilization, which it has become fashionable to degrade in recent years, should be taught and observed as the ground of moral order.

I do not claim originality in my statement. All I have done is to reiterate the manual of liberal democratic procedure which sustains whatever freedom we have. This is another generation in which democracy, as Dewey said, has to be born anew. Once again, educators are called upon to have the "guts" to stand for a learning society against those who would subvert it.